CLAIMS

We claim:

1. In a computer system that includes software under test, a method of verifying the software with one or more tunable test cases that are capable of being set to any of a plurality of verification levels, the method comprising acts of:

reading in one or more test cases that include a plurality of software testing instructions organized as a plurality of verification levels within a verification hierarchy, wherein at least two verification levels within the verification hierarchy define different amounts of checking to perform for determining if the software functions as intended when executed;

reading in verification settings that define one or more desired verification levels within the verification hierarchy;

identifying a portion of the plurality of software testing instructions within the one or more test cases that corresponds to the one or more desired verification levels; and

running the portion of the one or more test cases that corresponds to the one or more desired verification levels.

2. The method of claim 1, wherein a first test case from the one or more test cases is part of a first test group, the first test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification settings that define the one or more desired verification levels for the one or more test cases also define one or more desired verification levels for the first test group.

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3. The method of claim 2, further comprising acts of:

identifying a portion of the one or more software testing instructions within the first test group that corresponds to the one or more desired verification levels; and

running a portion of the first test group that corresponds to the one or more desired verification levels.

4. The method of claim 3, wherein the verification settings define a single desired verification level for the first test case and the first test group.

5. The method of claim 3, wherein the verification settings define a desired verification level for the first test case that is different from a desired verification level for the first test group.

6. The method of claim 4, wherein a second test case from the one or more test cases is part of the first test group, and wherein the verification settings define a desired verification level for the second test case different from the desired verification level for the first test group.

7. The method of claim 5, wherein a second test case from the one or more test cases is part of the first test group, and wherein the verification settings define a desired verification level for the second test case that is different from the desired verification level for the first test group.

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8. The method of claim 7, wherein verification settings define a desired verification level for the second test case that is different from the desired verification level for the first test case.

9. The method of claim 3, wherein a second test case from the one or more test cases is part of the first test group, and wherein third and fourth test cases from the one or more test cases are part of a second test group, the second test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification settings that define the one or more desired verification levels for the one or more test cases also define one or more desired verification levels for the second test group, the method further comprising acts of:

identifying a portion of the one or more software testing instructions within the second test group that corresponds to the one or more desired verification levels; and

running a portion of the second test group that corresponds to the one or more desired verification levels.

10. The method of claim 9, wherein the verification settings define different desired verification levels for each of the first test case, the second test case, the third test case, the fourth test case, the first test group and the second test group.

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11. The method of claim 10, wherein the first and second test groups are part of a third test group, the third test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification settings that define the one or more desired verification levels for the one or more test cases also define one or more desired verification levels for the third test group, the method further comprising acts of:

identifying a portion of the one or more software testing instructions within the third test group that corresponds to the one or more desired verification levels; and

running a portion of the third test group that corresponds to the one or more desired verification levels.

12. The method of claim 11, wherein the verification settings define a desired verification level for the third test group different from each of the first test case, the second test case, the third test case, the fourth test case, the first test group and the second test group.

13. The method of claim 1, wherein at least a portion of at least one of the plurality of software instructions determines that software information is available and uses the information for troubleshooting the software if it is determined that the software does not function as intended when executed.

14. The method of claim 13, wherein the software information available is debug information.

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15. The method of claim 1, wherein the portion of the one or more test cases that corresponds to the one or more desired verification levels does not produce any testing output.

16. The method of claim 1, wherein the portion of the one or more test cases that corresponds to the one or more desired verification levels produces one or more test outputs for verifying the software.

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17. In a computer system that includes software under test, a method of verifying the software with one or more tunable test cases that are capable of being set to any of a plurality of verification levels, the method comprising steps for:

loading one or more test cases that include a plurality of software testing instructions organized as a plurality of verification levels within a verification hierarchy, wherein at least two verification levels within the verification hierarchy define different amounts of testing to perform for determining if the software functions as intended when executed;

receiving verification setting instructions for one or more desired verification levels from within the verification hierarchy for use in testing the software; and

testing the software at the one or more desired verification levels by running the one or more test cases that include the plurality of software testing instructions that correspond to the one or more desired verification levels.

18. The method of claim 17, wherein a first test case from the one or more test cases is part of a first test group, the first test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification setting instructions for the one or more desired verification levels define a desired verification level for the first test case different from a desired verification level for the first test group, further comprising acts of:

identifying a portion of the one or more software testing instructions within the first test group that corresponds to the one or more desired verification levels; and

running a portion of the first test group that corresponds to the one or more desired verification levels.

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19. The method of claim 18, wherein a second test case from the one or more test cases is part of the first test group, and wherein the verification setting instructions define a desired verification level for the second test case that is different from a desired verification level for the first test group.

20. The method of claim 19, wherein verification setting instructions for the desired verification levels define a single verification level for the first and second test cases.

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21. In a computer system that includes software under test, a computer program product comprising one or more computer readable media carrying computer executable instructions that implement a method of verifying the software with one or more tunable test cases that are capable of being set to any of a plurality of verification levels, the method comprising acts of:

reading in one or more test cases that includes a plurality of software testing instructions organized as a plurality of verification levels within a verification hierarchy, wherein at least two verification levels within the verification hierarchy define different amounts of testing to perform for determining if the software functions as intended when executed;

reading in verification settings that define a desired verification level within the verification hierarchy;

identifying a portion of the plurality of software testing instructions within the one or more test cases that corresponds to the desired verification level; and

running the portion of the one or more test cases that corresponds to the desired verification level.

22. The computer program product of claim 21, wherein a first test case from the one or more test cases is part of a first test group, the first test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification settings that define the one or more desired verification levels for the one or more test cases also define one or more desired verification levels for the first test group.

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23. The computer program product of claim 22, wherein the verification settings define a single desired verification level for the first test case and the first test group, and wherein a second test case from the one or more test cases is part of the first test group, and wherein the verification settings define a desired verification level for the second test case different from a desired verification level for the first test group.

24. The computer program product of claim 22, wherein a second test case from the one or more test cases is part of the first test group, and wherein third and fourth test cases from the one or more test cases are part of a second test group, the second test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification settings that define the one or more desired verification levels for the one or more test cases also define one or more desired verification levels for the second test group, and wherein the verification settings define different desired verification levels for each of the first test case, the second test case, the third test case, the fourth test case, the first test group and the second test group.

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25. In a computer system that includes software under test, a computer program product comprising one or more computer readable media carrying computer executable instructions that implement a method of verifying the software with one or more tunable test cases that are capable of being set to any of a plurality of verification levels, the method comprising steps for:

loading one or more test cases that include a plurality of software testing instructions organized as a plurality of verification levels within a verification hierarchy, wherein at least two verification levels within the verification hierarchy define different amounts of checking to perform for determining if the software functions as intended when executed;

receiving verification setting instructions for one or more desired verification levels from within the verification hierarchy for use in testing the software; and

testing the software at the one or more desired verification levels by running the one or more test cases that include the plurality of software testing instructions that correspond to the one or more desired verification levels.

26. The computer program product of claim 25, wherein a first test case from the one or more test cases is part of a first test group, the first test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification setting instructions for the one or more desired verification levels define one or more desired verification levels for both the first test case and the first test group.

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27. The computer program product of claim 26, further comprising acts of:

identifying a portion of the one or more software testing instructions within the first test group that corresponds to the one or more desired verification levels; and

running a portion of the first test group that corresponds to the one or more desired verification levels.

28. The computer program product of claim 27, wherein the verification setting instructions define a single desired verification level for the first test case and the first test group.

29. The computer program product of claim 27, wherein the verification setting instructions define a desired verification level for the first test case that is different from a desired verification level for the first test group.

30. The computer program product of claim 28, wherein a second test case from the one or more test cases is part of the first test group, and wherein the verification setting instructions define a desired verification level for the second test case that is different from the desired verification level for the first test group.

31. The computer program product of claim 29, wherein a second test case from the one or more test cases is part of the first test group, and wherein the verification setting instructions define a desired verification level for the second test case that is different from the desired verification level for the first test group.

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32. The computer program product of claim 31, wherein verification setting instructions define a desired verification level for the second test case that is different from the desired verification level for the first test case.

33. The computer program product of claim 27, wherein a second test case from the one or more test cases is part of the first test group, and wherein third and fourth test cases from the one or more test cases are part of a second test group, the second test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification setting instructions that define the one or more desired verification levels for the one or more test cases also define one or more desired verification levels for the second test group, the method further comprising acts of:

identifying a portion of the one or more software testing instructions within the second test group that corresponds to the one or more desired verification levels; and

running a portion of the second test group that corresponds to the one or more desired verification levels.

34. The computer program product of claim 33, wherein the verification setting instructions define different desired verification levels for each of the first test case, the second test case, the third test case, thee fourth test case, the first test group and the second test group.

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35. The computer program product of claim 34, wherein the first and second test groups are part of a third test group, the third test group including one or more software testing instructions organized as one or more verification levels within the verification hierarchy, and wherein the verification setting instructions that define the one or more desired verification levels for the one or more test cases also define one or more desired verification levels for the third test group, the method further comprising acts of:

identifying a portion of the one or more software testing instructions within the third test group that corresponds to the one or more desired verification levels; and

running a portion of the third test group that corresponds to the one or more desired verification levels.

36. The computer program product of claim 35, wherein the verification setting instructions define a desired verification level for the third test group that is different from the each of the first test case, the second test case, the third test case, the fourth test case, the first test group and the second test group.

37. The computer program product of claim 25, wherein at least a portion of at least one of the plurality of software instructions determines that software information is available and uses the information for troubleshooting the software when it is determined that the software does not function as intended when executed.

38. The method of claim 37, wherein the software information available is debug information.

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39. The computer program product of claim 25, wherein the portion of the plurality of software testing instructions that corresponds to the one or more desired verification levels does not produce any testing output.

40. The computer program product of claim 25, wherein the portion of the plurality of software testing instructions that corresponds to the one or more desired verification levels produces one or more test outputs used to verify the software functions as intended.

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